

EXHIBIT A

Disputed Claim Term	Patent, Asserted Claims	Plaintiff's Proposed Construction	Defendants' Proposed Construction
"transceiver"	'627 patent, claims 20 and 26 '041 patent, claims 1 and 14 '008 patent, claims 1 and 14 '610 patent, claims 7 and 31 '427 patent, claims 7 and 29	"communications device capable of transmitting and receiving data wherein the transmitter portion and receiver portion share at least some common circuitry" <u>Intrinsic Evidence</u> <i>See, e.g.,</i> Ex. D ('008 patent), ¹ 1:25–32, 3:55–57, FIG. 1.	"communications device capable of transmitting and receiving data" <u>Intrinsic Evidence</u> <i>See, e.g.,</i> '627 at 3:24-51. ²
"scramble the phase characteristics of the plurality of carrier signals"	'627 patent, claims 20 and 26 '041 patent, claims 1 and 14 '008 patent, claims 1 and 14 '610 patent, claims 7 and 31 '427 patent, claims 7 and 29	"adjust the phase characteristics of the carrier signals by pseudo-randomly varying amounts" <u>Intrinsic Evidence</u> <i>See, e.g.,</i> Ex. D ('008 patent), Title, Abstract, 2:28–30, 2:34–3:3, 4:29–63, 5:25–31, FIGS. 1 and 2.	"adjust the phase characteristic of each of the plurality of carrier signals" <u>Intrinsic Evidence</u> <i>See, e.g.,</i> '627 at 2:33-40, 2:55-65, 2:67-3:2, 4:33-36, 4:43-48, 4:52-54, 4:57-62, 5:1-8, 5:14-17, 6:32-35, 6:47-49, 6:59-62, Figure 2.

¹ The Family 4 patents share a common specification. For brevity, Plaintiff's citations are to the '008 patent (Ex. D).

² Defendants' citations are to the '627 patent (Ex. B).

Disputed Claim Term	Patent, Asserted Claims	Plaintiff's Proposed Construction	Defendants' Proposed Construction
“substantially scramble the phase characteristics of the plurality of carrier signals”	'627 patent, claims 20 and 26 '041 patent, claims 1 and 14 '008 patent, claims 1 and 14 '610 patent, claims 7 and 31 '427 patent, claims 7 and 29	“the phase characteristics of the carrier signals are scrambled to produce a transmission signal with a reduced peak-to-average power ratio (PAR)” <u>Intrinsic Evidence</u> <i>See, e.g.</i> , Ex. D ('008 patent), Abstract, 2:44–47, 2:66–3:3, 4:32–38, FIGS. 1 and 2.	Indefinite <u>Intrinsic Evidence</u> <i>See, e.g.</i> , '627 at 1:26-2:26.
“multiple carrier signals corresponding to the plurality of phase shifted and scrambled carrier signals are used by the first [multicarrier] transceiver to demodulate a same [input] bit value of the received bit stream”	'041 patent, claims 1 and 14 '610 patent, claims 7 and 31 '427 patent, claims 7 and 29	“a first carrier signal is used by the first multicarrier transceiver to demodulate the value of a bit of the received bit stream and at least one more carrier signal is used by the first multicarrier transceiver to demodulate the value of the same bit of the received bit stream, wherein the carrier signals correspond to the plurality of phase-shifted and scrambled carrier signals.” <u>Intrinsic Evidence</u> <i>See, e.g.</i> , Ex. D ('008 patent), 2:16–25, 3:57–62, 4:43–47, FIG. 1.	Indefinite <u>Intrinsic Evidence</u> <i>See, e.g.</i> , Ex. G ('134 provisional) at 1-2; '627 at 2:10-20, 4:52-5:8.

Disputed Claim Term	Patent, Asserted Claims	Plaintiff's Proposed Construction	Defendants' Proposed Construction
“multiple carrier signals corresponding to the scrambled carrier signals are used by the first multicarrier transceiver to modulate the same bit value”	’008 patent, claims 1 and 14	<p>“a first carrier signal is used by the first multicarrier transceiver to modulate the value of a bit and at least one more carrier signal is used by the first multicarrier transceiver to modulate the value of the same bit, wherein the carrier signals correspond to the scrambled carrier signals.”</p> <p><u>Intrinsic Evidence</u></p> <p><i>See, e.g.</i>, Ex. D (’008 patent), 2:16–25, FIG. 1.</p>	<p>Indefinite</p> <p><u>Intrinsic Evidence</u></p> <p><i>See, e.g.</i>, Ex. G (’134 provisional) at 1-2; ’627 at 2:10-20, 4:52-5:8.</p>
“carrier signals for modulating an input bit stream”	’627 patent, claims 20, 26 ’041 patent, claims 1, 14 ’008 patent, claims 1, 14	<p>“carrier signals that are used by a multicarrier transceiver to modulate an input bit stream”</p> <p><u>Intrinsic Evidence</u></p> <p><i>See, e.g.</i>, Ex. D (’008 patent), 1:33–47, 3:63–4:5, 4:14–25, FIG. 1.</p>	<p>“carrier signals that are used to modulate an input bit stream”</p> <p><u>Intrinsic Evidence</u></p> <p><i>See, e.g.</i>, ’627 at Abstract, 2:41-42, 2:66-3:2.</p>

Disputed Claim Term	Patent, Asserted Claims	Plaintiff's Proposed Construction	Defendants' Proposed Construction
“phase shift”	'627 patent, claims 20, 26 '041 patent, claims 1, 14 '008 patent, claims 1, 14 '610 patent, claims 7, 31 '427 patent, claims 7, 29	“the amount by which a phase is (or will be) shifted” <u>Intrinsic Evidence</u> <i>See, e.g.,</i> Ex. D ('008 patent), 6:46–8:17.	Defendants Zhone Technologies, Inc., ZyXEL Communications, Inc., ZyXEL Communications Corp., and AdTRAN, Inc. propose: “the amount by which to adjust the phase” Defendant 2Wire, Inc. proposes: “angle by which the phase of a carrier signal is rotated” <u>Intrinsic Evidence</u> <i>See, e.g.,</i> '627 at 4:33-36, 5:18-21, 6:46-49, 2:10-26, 6:65-8:17.
“[the] combining of a phase for each carrier signal with the phase characteristic of that respective carrier signal”	'041 patent, claim 1 '610 patent, claims 7, 31 '427 patent, claims 7, 29	“adjusting the phase of each carrier signal by an amount computed for that carrier signal” <u>Intrinsic Evidence</u> <i>See, e.g.,</i> Ex. D ('008 patent), 4:43-47, 3:57–62, 6:46–8:17.	Indefinite <u>Intrinsic Evidence</u> <i>See, e.g.,</i> '627 at 1:34-35.

Disputed Claim Term	Patent, Asserted Claims	Plaintiff's Proposed Construction	Defendants' Proposed Construction
“computing a phase shift for each carrier signal”	'627 patent, claims 20, 26 '008 patent, claims 1, 14	Plain and ordinary meaning	<p>“computing an amount by which the phase of each carrier signal will be adjusted”</p> <p><u>Intrinsic Evidence</u></p> <p><i>See, e.g.</i>, '627 at 2:33-40, 2:55-65, 4:33-36, 4:52-54, 5:1-8, 5:8-21, 6:32-35, 6:47-49, 6:59-62, Figure 2.</p>
“a phase shift for each carrier signal is [at least] based on”	'041 patent, claims 1, 14 '610 patent, claims 7, 31 '427 patent, claims 7, 29	Plain and ordinary meaning	<p>“a phase shift for each carrier signal is computed [at least] based on”</p> <p><u>Intrinsic Evidence</u></p> <p><i>See, e.g.</i>, '627 at 2:30-3:2, 4:33-36, 4:52-5:8, 5:18-21, 6:32-35, 6:47-49, 6:59-62, Figure 2.</p>

Claim Term	Patent, Asserted Claims	Agreed Construction
“multicarrier”	’627 patent, claims 20 and 26 ’041 patent, claims 1 and 14 ’008 patent, claims 1 and 14 ’610 patent, claims 7 and 31 ’427 patent, claims 7 and 29	“having multiple carrier signals that are combined to produce a transmission signal”
“carrier”/“carrier signal”/“carrier signals”	’627 patent, claims 20 and 26 ’041 patent, claims 1 and 14 ’008 patent, claims 1 and 14 ’610 patent, claims 7 and 31 ’427 patent, claims 7 and 29	“signal[s] that can be modulated to carry data”
“combining the phase shift computed for each respective carrier signal with the phase characteristic of that carrier signal” “combining of a phase shift for each carrier signal with the phase characteristic of that respective carrier signal”	’627 patent, claims 20, 26 ’041 patent, claim 14 ’008 patent, claims 1, 14	“adjusting the phase of each carrier signal by an amount computed for that carrier signal”